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ABSTRACT

This paper describes a three-year project funded by Title IV/C of the Elementary and Secondary Education Act (ESEA) and initiated by the Minnesota state board of education to reduce sex bias among students and teachers in Minneapolis. Emphasis during the first year of the project was on the development of nonsexist curriculum materials to be used in intermediate and secondary classrooms. During the second year, lessons were developed for use in primary classrooms. The third year focused on the extent of attitude change. By the end of the project, 95 percent of Minneapolis teachers had received inservice training in nonsexism with the understanding they would teach the nonsexist lessons in their classrooms. Data were collected via questionnaires, interviews, and observations. Results showed that the use of nonsexist curriculum materials changed student and teacher attitudes to a significant degree. With the exception of the secondary level, teachers reported they and their students became more aware of the need to focus on the elimination of sex bias from the educational system. The report hypothesized that because students continually change classes at the secondary level, there is less chance for any single teacher to serve as a role model. Also, nonsexist lessons being taught become much more diffused when they are only a part of a one-hour class. (Author/LD)

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ELIMINATING SEX BIAS - PIPE DREAM OR POSSIBILITY?

A program description and evaluation summary
of the Title IV/C, ESEA project,
"Eliminating Sex Bias in Education"

Submitted to:

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July 15, 1977

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ELIMINATING SEX BIAS-PIPE DREAM OR POSSIBILITY?

For the past three years the Minneapolis Public Schools have been involved in an experimental program called "Eliminating Sex Bias in Education." Minneapolis teachers and students have demonstrated that a goal as complex and idealistic as eliminating sex bias in education is not a mere pipe dream. To accomplish the goal, however, entails significantly changing the attitudes and behaviors of countless teachers, administrators, and students. To anyone familiar with educational psychology this is a very tall order. And to anyone familiar with the issue of sexism and the complexities and subtleties involved in reducing sexist attitudes, the task becomes even larger.

The Minneapolis program, a Title IV/C, ESEA-funded project, has reached nearly seven thousand students by way of two hundred and twenty-five teachers who participated in the project's inservice training and agreed to teach the project's non-sexist lessons in their classrooms. The attitudes of these teachers and students have changed, and changed significantly. The report from teachers is that in working with non-sexist curriculum materials specifically related to sex bias issues teachers and students alike become far more aware of the need to focus on the elimination of sex bias from the educational system. An extension of this awareness has been shown in the change scores on attitude measures which were given before participation in the program and again at the end. First, however, before turning to the data, some background on the project.

The Case of Minneapolis - A Description of the Program

In 1972 the Minnesota State Board of Education addressed itself to the problem of sex bias by adopting a "Statement of Policy and Proposed Action on Eliminating Sex Bias in Education." In 1973 a Sex Bias Task Force was established to develop guidelines for implementation of the policy statement. The Women's Studies Department was proposed as a result of the recommendations of the Minneapolis Task Force on Sexism. The proposal for the "Eliminating Sex Bias in Education" project was generated by the Women's Studies Department in the Fall of 1974 and the project became an important part of the activities of the department. The ultimate goal of the project was to reduce sex bias among students and teachers in Minneapolis, a goal which the project successfully met.

The major emphasis of the project during the first year was on the development of non-sexist curriculum materials to be used in intermediate and secondary classrooms. During the second year, lessons for use in primary classrooms were developed. Piloting and dissemination of the first year curriculum materials and the creation of additional intermediate and secondary lessons were major activities of the second year. The third year focused primarily on the issues of attitude change and the question: Was the program successful in reducing sexist attitudes in teachers and students?

A significant activity of the project during its three-year duration was the building inservice of all faculty members during their Tuesday release time. By the end of the project, ninety-five percent of the Minneapolis schools had received the inservice training in non-sexism.

The Women's Studies program staff focused the majority of their time and resources on the development and dissemination of non-sexist curriculum materials. Their aim was to produce lessons for all grades, Kindergarten-12, which demonstrated sex equality while teaching educationally relevant concepts and skills. There was a concerted effort to cover areas traditionally omitted from sex-biased curricular materials. Issues surrounding women in history, legislation affecting women's rights and the Equal Rights Amendment served as a foundation for exercises and discussions. Also integrated into the lessons were activities on socialization, values clarification, media representation of women, sex roles, and numerous other topics.

Another major activity of the project was the creation and coordination of an extensive Womens' Resource Center. The Resource Center was established during the second year of the project. Audio visual meterials, books, magazines, games, and toys, all evaluated to be non-sexist or counter-sexist in nature, were assembled to be available on loan to the Minneapolis Schools. Any staff member was able to request materials for use in their classrooms or for their own personal growth. During the second year 1435 requests were made by staff members for materials from the Resource Center. A Resource Catalog describing the materials was assembled and made available to staff. During the third year of the project the Resource Center filled 3611 requests for materials. The sharp increase indicates the growth in popularity of the Center and reflects the increasing desire on the part of teachers to use non-sexist materials in their classrooms. The Resource Center proved to be a valuable source of materials many of which would otherwise have been unavailable to teachers.

The "Eliminating Sex Bias" program was aimed at teachers and students in Minneapolis, a large metropolitan community with a population of approximately 400,000. Program staff gave workshops and demonstrations and participated in on-going outreach activities to reach as many interested teachers as the project could accommodate. Teachers voluntarily signed up for the program with the understanding they would attend an inservice session with project staff and teach the non-sexist lessons in their classrooms. During the second year professional growth credits were offered as incentive to teachers. During the third year, participation was encouraged only by providing substitute teachers during the full-day inservice.

The Intervention for Teachers and Students

The Women's Studies staff developed a two-phase intervention program for students and teachers. The first phase, a one-day inservice training workshop for teachers, involved the presentation of the curriculum materials (written and multi-media techniques) and served as a consciousness-raising session. Teachers volunteered to participate in the inservice session which was made possible by the Women's Studies program covering substitute expenses. Day-long inservice training sessions were held separately throughout the year for secondary and elementary teachers.

The second phase of the intervention occurred when teachers actually taught the lessons in their classrooms. To facilitate this, inserviced teachers received a curriculum notebook complete with classroom exercises, discussion guides, and a variety of lessons relating to non-sexism. Materials ranged from values clarification exercises to lessons on sexism in advertising, television and the comic strips. Teachers had full access

to the Women's Studies Resource Center which supplied multiple copies of books for use in the classroom as well as a wide range of multi-media materials.

Teachers were invited to teach as many of the lessons as they wanted, but, for purposes of the evaluation design, were asked to use the following procedure initially:

1) Administer an attitude questionnaire to the students before any lessons were taught (pre-test).

2) Teach five of the lessons in non-sexism (from the curriculum package).

3) Administer the same attitude questionnaire to the students (post-test) in an attempt to see if there had been a change in attitudes.

4) Take an attitude post-test, themselves, after teaching the five lessons (teachers had taken a pre-test at the inservice.)

Evaluation Results on Attitude Change: Second Year

Evaluation of the "Eliminating Sex Bias" program began in the second year of the program (1975-1976) with a design which measured teacher and student attitudes before and after using the non-sexist lessons. A significant change in attitudes was found in students grades K-6 and among teachers in all grades, but change in attitudes was not found at the secondary level. There was some concern about the validity of these findings, however, in that it was thought possible the change in attitudes could be occuring because of a heightened consciousness throughout society rather than as a direct result of the non-sexist curriculum materials.

Attitude Change: Third Year

The evaluation for the third year of the program addressed this concern by employing a rigorous research design which attempted to assure

that the results obtained could be attributed strictly to the program. The attitude measures were given not only to students and teachers in the program but also to a control group, i.e., students and teachers who took the attitude measures at the same time as the participants in the program (allowing six weeks to elapse in between), but who received no treatment. When the data was received from these two groups (experimental and control) change scores were computed which measured whether the change in attitudes of the participants in the program was significantly greater than the change in participants who had not been exposed to the lessons.

Change scores are a sophisticated way of answering the questions: Have teachers' and students' attitudes changed as a result of the program? And, have their attitudes changes significantly more than the attitudes of their counterparts not in the program? change scores not only reveal whether or not the treatment has made a difference, but also whether or not a comparable group, not given the treatment, has shown changes in attitude. An examination of teacher and student change scores were found to be statistically significant ($p < .05$) for all teachers and students in grades K-6 (see Table I).

As these data indicate, teachers in all grades and students in grades K-6 in the experimental group showed significantly greater change in attitudes than participants in the control group. Significant change was not detected in grades 7-12 when comparing the experimental and control group.

Table I

COMPARISON OF
EXPERIMENTAL AND CONTROL GROUPS:
Change Score Levels of Significance

Group	Number of Participants	Level of Significance
Teachers	70	.020
Students		
K-3	750	.003
4-6	230	.021
7-9	1000	.387
10-12	250	.291

When comparing pre-test scores on the attitude questionnaire to post-test scores, statistically significant change ($p = .000$) was detected in the experimental group in grades 7-9. It was only in comparing the experimental group with the control group that the change scores were not significant. The control group, in other words, showed statistical significance in their attitude change ($p - .043$) from pre to post-testing. A possible explanation for this change in the control group has been offered by teachers who participated in the control group and by project staff. It is believed there was an instrumentation effect. In other words, the students in the control group who took the test were affected (i.e., treated) merely by taking the test. Teachers reported (confirming observations recorded during the piloting of the attitude test) that students had questions, comments and reactions to the various items on

the test and, in discussing their concerns following the test administration, certain attitudes were likely affected.

The goal of the Women's Studies project was to reduce sexism in program participants' attitudes at a statistically significant level. This did occur. The fact that it occurred in the 7-9 control group can be partially explained by an instrumentation effect. An added possibility is that, because teachers who volunteered their classes to be members of the control group were interested in the issue of sexism (teachers were promised copies of the curriculum materials in exchange for their participation in the control group), they may have inadvertently contaminated the experiment by teaching about or discussing related issues during the time period between pre-and post-testing. We offer these explanations as possible reasons for the lack of significance between the change scores of the experimental and control groups in grades 7-9. The fact that the experimental group did show statistically significant change in attitudes, however, is of note.

Validation of the Project

On May 11, 1977 a team of validators (experts from out of the State chosen to evaluate the validity and worth of innovative projects) visited the project site. Based on the evaluation data showing significant change in students' and teachers' attitudes as a result of the program and using supplementary evidence gathered from visiting classrooms and discussing the project with teachers and administrators, the validation team approved the project for validation. Their validation included all aspects of the program with the exception of grades 10-12. This was

based on the fact that attitude change at this level was not found to be statistically significant. Their decision allows a fixed sum of money to be allocated from the State of Minnesota for dissemination efforts.

Qualitative Results: Observations and Interview Results

The data collected from attitude instruments were supplemented by three other data sources: interviews of a small group of teachers and students; classroom observations; and observations on inservice training sessions for teachers. The intent in adding these qualitative methods to the more rigorous experimental design is two-fold. The first and major reason for the qualitative data is to actually get into classrooms and talk to teachers and students to insure that the treatment (the use of non-sexist curriculum materials) is actually being implemented as planned. There is always the possibility that teachers are not using the lessons as intended or that the lessons are not being used at all. Another important reason for using a variety of data collection methods is, not only to gain more confidence in overall conclusions, but also because one source of data can often be used to explain others.

The observations and interviews in this study served both of those purposes, they confirmed to us that the program had been implemented as planned and gave us some tentative explanations as to why there had been no change in student attitudes at the secondary level (grades 10-12).

Teachers at the secondary level indicated in interviews that students in this age category were much more resistant to change than younger students and in some cases were openly hostile toward the subject matter. This hostility was especially evidenced in lessons dealing with interpersonal relations and dating patterns; teachers noted that students had

been eagerly looking forward to dating and were now being asked to re-examine traditional male-female relationships. To the teachers' explanation for the lack of change at the secondary level, we would like to add one of our own. When students enter junior high school, they most typically are in a setting where they change classes every hour (this can be compared with elementary children who most often have the same teacher all day or for the major part of the day). It is our hypothesis that with students continually changing teachers at the secondary level, there is less chance for any single teacher to serve as a role model. The non-sexist lessons being taught become much more diffused when they are only a part of a one-hour class. In an elementary classroom, by comparison, teachers have the opportunity to introduce the theme of the non-sexist curriculum into a number of subjects across a day rather than limiting themselves to just one hour.

The qualitative results serve one final purpose, to give teachers and students a chance to express their feelings about the inservice training and the curriculum materials. The data from all of these sources were highly positive. Following are some of the comments from teachers reflecting their feelings about the program.

> An excellent program and am planning to complete all lessons and repeat next year. Personally I've grown in understanding of sexism and am really aware of it. Pooh-poohed the idea of women's lib when I first heard about it, but have certainly "changed my tune" since becoming involved in this program. Maybe you can't teach an old dog new tricks, but you can give them a new and more positive viewpoint.

> As far as the lessons go they're <u>great</u>--first program that I could use immediately without revamping to fit my grade level. Have had substitutes take over a lesson without any problems. Would recommend this program to any teacher. You've done a marvelous job and I truly appreciate it. More power to you!

> This (the program) has put me in touch with some of my own biases against adolescent boys. It's very interesting. It made me conscious of how much harsher I am with them than with the girls--I thought of them as so noisy and show-offy. I think now I'm much more equal in my treatment of all of them.
>
> The students' attitudes--yes, they're changing; they think longer before they make comments.

Students interviewed reflected many of these same sentiments; following are some of their comments on the non-sexist materials.

> It gives us something about women's lib rather than just the equal rights amendment.
>
> It's teaching us things that we haven't really thought of before . . . about how women are treated differently.
>
> They're fun . . . Not just reading things.

Interviews and observations, then, confirmed the statistical results; the non-sexist curriculum materials do make a difference in changing student and teacher attitudes.

Conclusions

Data from the Minneapolis School system have demonstrated that eliminating sex bias in education is not simply another academic pipe dream. Using a rigorous experimental design evaluation technique, both student and teacher attitudes were found to be less sexist after an intervention program consisting of an inservice workshop coupled with at least five non-sexist lessons.

The results should serve as a source of optimism to teachers and evaluators alike. The Minneapolis experience illustrates that it is possible not only to affect change in a complex attitude set such as sexism, but also that this attitude change can be documented.